

ABSTRACT

[0089] The invention is directed to a photosensor for color measurement based on three spectral components, particularly for highly accurate color measurement for testing and guaranteeing color constancy in engineered surfaces and consumer articles of any kind. The object of the invention, to find a novel possibility for color measurement based on a three-range method with color measurement values generated by preceding interference filters with different spectral responses which permits a virtually true-color measurement in conformity with standards in a simple manner without costly reference light calibration, is met according to the invention in that the photosensor comprises at least three partial surfaces which are covered by different interference filters adapted to the X-, Y- and Z-spectral characteristic of the human eye, each partial surface being arranged so as to be uniformly distributed in a sector-shaped manner and so as to cover the same area around a center with passivated webs located therebetween, and every partial surface is provided with an interference filter whose transmission characteristic over the wavelength of the light to be measured spectrally is adapted to the response of the human eye, wherein the spectral components passed by the interference filters approximate the normal spectral value functions of the human eye in color coordinates of the color space.